Appl. No. 09/308,314
Amdt. dated January 27, 2004
Reply to Office Action of November 5, 2003

AMENDMENTS TO THE CLAIMS

Claims 25 and 31-34 were amended in the response dated August 7, 2003.

Claims 2 and 13 were previously canceled.

Claims 4, 7-12, 18-24 and 31-34 are being canceled.

1. (previously presented) A shield cleaning system, operating by spraying with washing fluid, for shields of an automobile, comprising:

a motor, and a washing arm movable over and at a distance from the shield by said motor, and a push rod interconnecting the motor with the washing arm for displacing the washing arm in a longitudinal direction of the push rod, the washing arm extending transversely of the direction of longitudinal displacement;

at least one fluidic washing nozzle arranged on the washing arm for spraying washing fluid onto the shield;

wherein the washing nozzle is movable by the washing arm over a region of the shield which is to be cleaned, wherein the washing nozzle has an outlet opening facing

said shield, and the washing fluid is sprayable on at least portions of the shield immediately during movement of the washing arm from a basic position of the washing arm; and

wherein the fluidic washing nozzle has a washing fluid jet oscillating essentially transversely to the direction of movement of the washing arm, and a shape of the push rod corresponds to a contour of the shield.

Claim 2 (canceled)

3. (previously presented) The shield cleaning system as claimed in claim 1, wherein the washing arm (6) is of tubular form for receiving a washing fluid duct (8) leading to a plurality of washing fluid line (10).

Claim 4 (canceled)

5. (previously presented) The shield cleaning system as claimed in claim 3, wherein a nonreturn valve (11) is arranged in the washing fluid duct (8).

6. (previously presented) The shield cleaning system as claimed in claim 3, wherein a heating element comprising a resistance wire 15 is arranged in the washing fluid duct (8).

claims 7-12 (canceled)

Claim 13 (canceled)

14. (previously presented) The shield cleaning system as claimed in claim 1, wherein, in the basic position, the washing nozzles (12-14, 38) are countersunk in a recess (5, 36) of an automobile component adjacent to the shield (2, 34).

15. (original) The shield cleaning system as claimed in claim 14, wherein the washing arm (37) has a cover (45) closing the recess (36) in the basic position.

16. (previously presented) The shield cleaning system as claimed in claim 1, wherein the washing arm (6, 37, 48, 53) is injection molded plastic.

17. (previously presented) The shield cleaning system as claimed in claim 1, wherein a guide (41) of the push rod (39) or a mounting of the washing arm is in one piece with a housing (44) of the automobile lights (35).

claims 18-24 (canceled)

25. (previously presented) A shield cleaning system, operating solely by spraying with washing fluid, for shields of an automobile, comprising

a motor,

a washing arm component (60) movable over and at a distance from the shield by said motor, and a washing nozzle arranged on the washing arm component for spraying washing fluid onto the shield, wherein the washing nozzle has an outlet opening facing said shield in and defining all spraying positions of the nozzle and that of the washing arm component immediately during movement of the washing arm component from a basic position, the movement retaining the washing arm component parallel to the basic position, and the washing nozzle sprays fluid on at least portions of the shield concurrently with said movement of the washing arm component, and wherein

the motor (61) for moving the washing arm component (60) is a motor (61) driven by the washing fluid, wherein the washing nozzle (12-14, 25, 38, 50, 54, 63) is a fluidic nozzle with a washing fluid jet oscillating essentially transversely to the direction of movement of the washing arm (6, 37, 48, 53), the fluidic nozzle comprising a swirl chamber with return ducts to an inlet region of the swirl chamber to induce oscillation of an emerging fluid washing jet.

26. (previously presented) The shield cleaning system as claimed in claim 1, wherein there is a control device (22) for conveying the washing fluid to the washing nozzles (24, 25) at the start and end of an intended time interval.

27. (previously presented) The shield cleaning system as claimed in claim 1, with a washing fluid pump

for conveying washing fluid to a front shield of the automobile, wherein the washing fluid pump (23) selectively conveys washing fluid in two directions, the washing fluid being capable of being conveyed in one direction to the front shield and in the other direction to other shields (2, 34, 65) of automobile lights (3, 4, 35).

28. (previously presented) The shield cleaning system as claimed in claim 1, wherein distance of the nozzle from the shield changes during movement of the washing arm and the nozzle is closest to the shield at an edge of the shield.

29. (previously presented) The shield cleaning system as claimed in claim 25, wherein distance of the nozzle from the shield changes during movement of the washing arm component and the nozzle is closest to the shield at an edge of the shield.

30. (previously presented) The shield cleaning system as claimed in claim 3, wherein a heating element comprising a resistance wire 15, is arranged at the washing nozzles.

claims 31-33 (canceled)

claim 34 (canceled)